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Vocabulary Readers

# Studying the Past



by Gary Miller



Number of Words: 512

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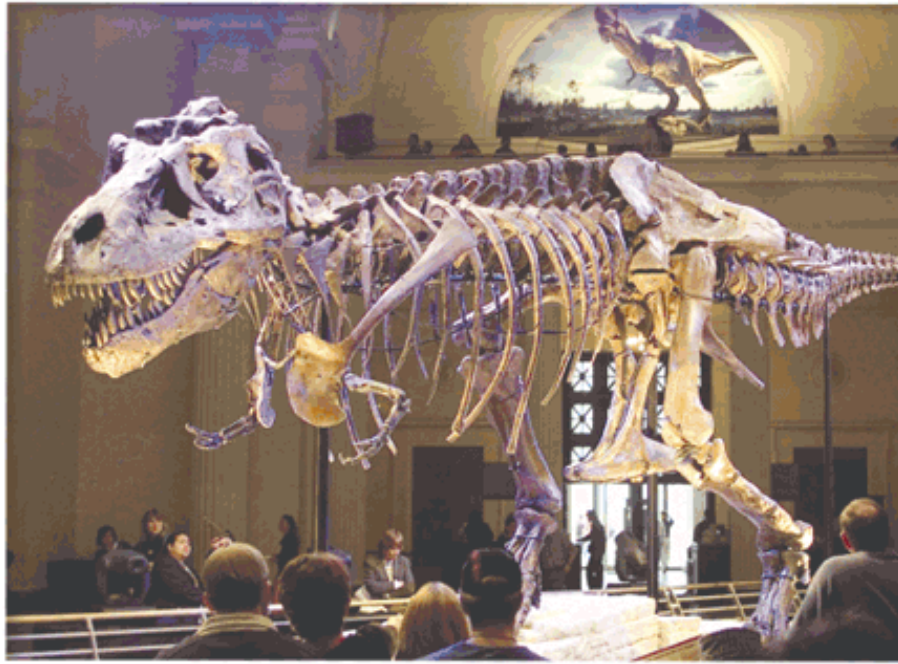
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# Studying the Past



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## Strategy Focus

As you read, **monitor** your understanding.  
**Clarify** difficult parts by rereading or reading ahead.



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## Key Vocabulary

**erosion** wearing away of earth and rock

**evidence** information used to draw a conclusion

**excavation** digging to find something

**extinct** no longer living on Earth

**fossils** remains of animals or plants

**geologists** scientists who study rocks

**hypotheses** scientific guesses

**paleontologist** scientist who studies ancient life

**specimens** samples for scientific study

**theory** possible explanation

## Word Teaser

If you find the evidence you lacked,  
A \_\_\_\_\_ may become a fact.



## Uncovering History

Can you imagine finding dinosaur bones in your own backyard? **Fossils**, the hardened remains of animals or plants, can turn up almost anywhere. Bulldozers uncover them. Farmers sometimes find them while digging in their fields. Fossils may also be uncovered naturally, when wind or rain causes **erosion**, or the wearing away of soil.





**Paleontologists** make a career of studying fossils. They dig for fossils at carefully chosen sites all around the world. If their **excavations** unearth ancient remains such as a bone or footprint, they study their find carefully. A new fossil may tell paleontologists something new about life on Earth long ago.





## Handle with Care

Fossils break easily. So paleontologists handle them carefully. They cover fossils with plaster and cloth to protect them. Then they pack them in a secure box and ship them to the paleontology lab.

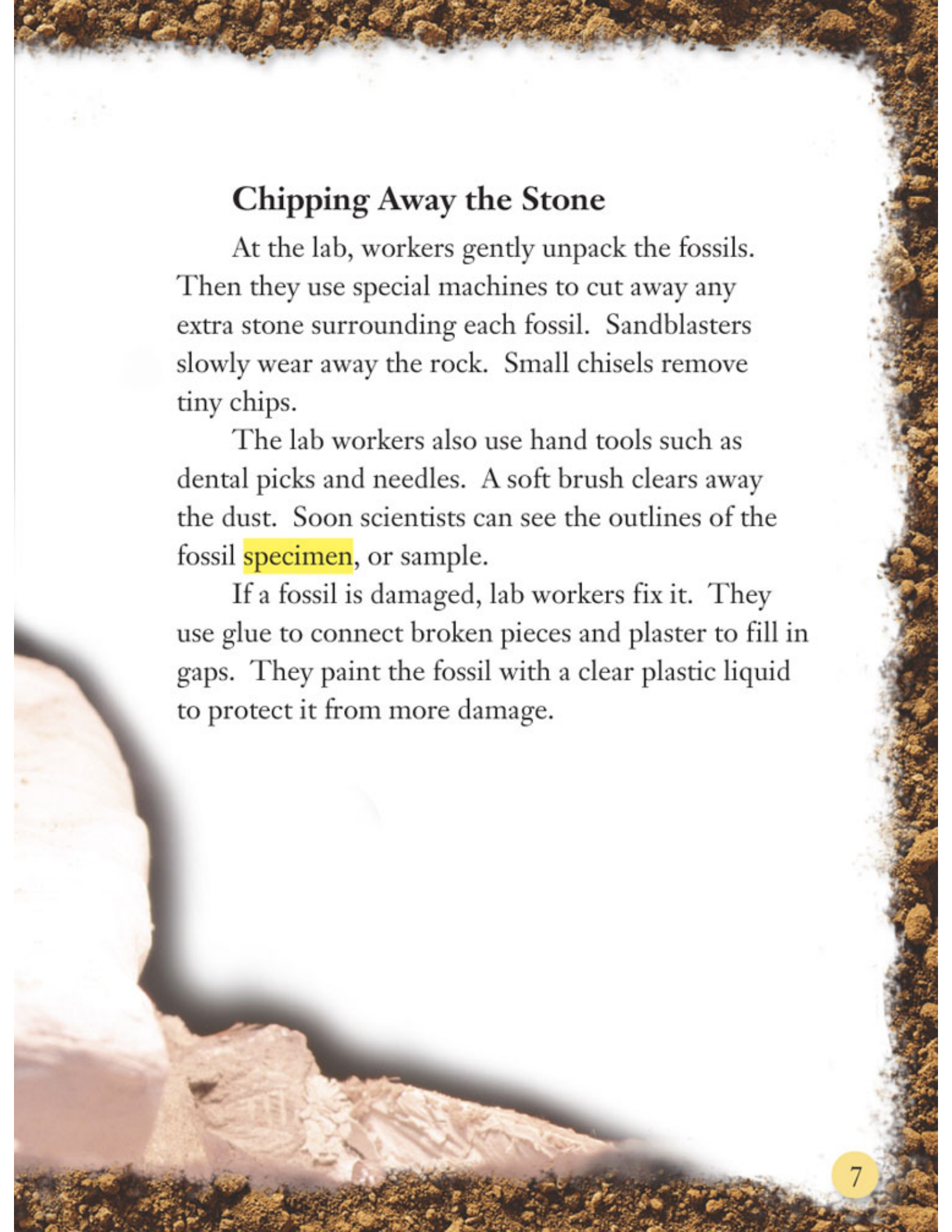


Preparing a dinosaur fossil for travel.









## Chipping Away the Stone

At the lab, workers gently unpack the fossils. Then they use special machines to cut away any extra stone surrounding each fossil. Sandblasters slowly wear away the rock. Small chisels remove tiny chips.

The lab workers also use hand tools such as dental picks and needles. A soft brush clears away the dust. Soon scientists can see the outlines of the fossil **specimen**, or sample.

If a fossil is damaged, lab workers fix it. They use glue to connect broken pieces and plaster to fill in gaps. They paint the fossil with a clear plastic liquid to protect it from more damage.



## Taking a Closer Look

After the fossil is uncovered, paleontologists take a closer look at it. First, they try to figure out the fossil's age. **Geologists**, scientists who study rocks, often help out. They can tell the age of the rock in which the fossil was found.





Next, paleontologists compare the new fossils to other fossil specimens in the lab. They also compare the fossils to the bones of living animals. Fossils aren't always from animals that are extinct, or no longer living on Earth.

Once in a while, a fossil doesn't match the bones of any known animal, living or **extinct**. It's from an animal no one knew of before!





When paleontologists study the fossils of an extinct or unknown animal, they make **hypotheses** about the animal's life. They base their guesses on **evidence** they gather from the fossil, as well as what they already know. Then they come up with a **theory**, or several theories, about the animal. A theory might try to explain how the animal lived, or how it became extinct.





## Sharing Information

Paleontologists often share their discoveries with other scientists. Working together, they can find out more about fossils.

Usually, paleontologists don't send their fossils to other labs. Instead, they send copies. Workers make molds of the fossils. Then they fill the molds with plastic to get exact copies of the fossils. These copies are then sent out to other scientists.

Paleontologists share their work in other ways, too. Museums display fossils and fossil models. These displays tell visitors about the exciting things paleontologists have discovered about life long ago.





## Responding

### Putting Words to Work

1. What section of the text tells how **paleontologists** uncover **fossils** in the lab?
2. What information do **paleontologists** use to develop **hypotheses** about a fossil animal's life?
3. Complete the following sentence:  
Fossils come from **extinct** animals as well as from \_\_\_\_\_.
4. How do **geologists** help **paleontologists**?
5. **PARTNER ACTIVITY:** Think of a word you learned in the text. Explain its meaning to your partner and give an example.

### Answer to Word Teaser

theory



## Word Builder

A **paleontologist** is one kind of scientist. How many other kinds of scientists do you know about? Copy the chart below. Next to each type of scientist, tell what that scientist studies. If you need help, use a dictionary.

| Types of Scientists |                 |
|---------------------|-----------------|
| paleontologist      | studies fossils |
| geologist           |                 |
| astronomer          |                 |
| biologist           |                 |
| chemist             |                 |
| botanist            |                 |

## Write About It

Write a paragraph explaining what type of scientist you would most like to be, and why. Use one of the terms from your Word Builder chart.



## Key Vocabulary

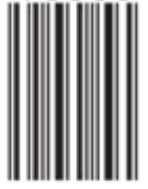
erosion  
evidence  
excavation  
extinct  
fossils  
geologists  
hypotheses  
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specimens  
theory

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